PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 09/658,866 Confirmation No.: 2936
Applicant(s): Gunther et al.
Filed: September 8, 2000
Art Unit: 3626
Examiner: Rachel L. Porter
Title: METHOD AND SYSTEM FOR DEVELOPING OPTIMIZED SCHEDULES

Docket No.: 023895/258395
Customer No.: 00826

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL REQUEST FOR REVIEW

Sir:

Applicant in the above-identified patent application hereby requests review of the Official Action dated June 3, 2005, rejecting Claims 1-17 of the above-identified application. This request is being filed concurrent with a Notice of Appeal, and no amendments are being filed herewith.

Remarks/Arguments in support of this request begin on page 2 and end on page 6 of this paper, and accordingly include nor more than the five (5) pages of remarks permitted to be provided.

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Amdt. dated 09/06/2005
Reply to Office action of June 3, 2005

REMARKS/ARGUMENTS

This communication is filed in response to the final Official Action of June 3, 2005. The final Official Action continues to reject Claims 1-4, 6-7, 11-14, and 16-17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,652,867 to Barlow et al. In addition, the final Official Action rejects Claims 5, 8-10, and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Barlow '867 patent in view of Official Notice. As explained below, however, Applicants respectfully submit that the claimed invention of the present application is patentably distinct from the Barlow '867 patent. In view of the remarks presented herein, Applicants respectfully request reconsideration and reversal of all of the aforementioned rejections.

The Barlow '867 patent discloses a computerized airline reservation system simulator that can be used by an airline to maximize revenues (please see our January 28, 2005 Amendment on pages 6-8 for a description of the Barlow '867 patent). In contrast to the disclosure of the Barlow '867 patent, independent Claims 1, 8, and 11 recite a computer-implemented method, system, and computer program product, respectively, for optimizing a schedule of legs employed by at least one service provider in transporting objects between geographic markets. Independent Claims 1, 8, and 11 include identifying a set of itineraries for serving each market in a set of markets, each itinerary comprising one or more legs, and generating a set of market plans for each of a plurality of markets, wherein the set of market plans for each market comprises a plurality of market plans with each market plan including a modified set of the itineraries for the market. The profitability of each market plan is then individually determined for each market following the generation of the set of market plans for each of the plurality of markets. Finally a subset optimizing overall profit of the schedule is selected from the set of market plans for each market while also taking into account the resources of a service provider. As recited by the independent claims, this subset selection is conducted following a determination of the profitability of each market plan for each market.

In the final Official Action and second Official Action, the Examiner alleges that the Barlow '867 patent anticipates independent Claims 1 and 11, and that independent Claim 8 is obvious in light of the Barlow '867 patent in view of Official Notice. In particular, the Examiner finds that the Barlow '867 patent discloses the identifying step (Figure 1 and col. 3, lines 45-65),

the generating step (Figures 2 and 4; col. 4, lines 15-45), and the determining step (Figures 2, 4-5; col. 2, lines 39-47; col. 6, lines 36-46 and 56-67) of independent Claims 1 and 11. Furthermore, in the Response to Arguments set forth in the final Official Action, the Examiner rejects our previous arguments that the Barlow '867 patent does not teach or suggest generating a set of market plans (i.e., a plurality of market plans) for each of a plurality of markets and determining the profitability of each market plan. More specifically, the Examiner believes that this particular limitation is satisfied by the Barlow '867 patent because Barlow discloses obtaining a set of results and summarizing these results (Figure 1; col. 4, lines 15-20) and performing analyses and valuations for several market plans for various individual markets (col. 5, line 40 – col. 6, line 3).

However, Applicants respectfully disagree with the Examiner's allegations. In particular, Applicants submit that the disclosure of the Barlow '867 patent does not teach or suggest generating a plurality of market plans for each of a plurality of markets and then individually determining the profitability of each market plan for each market. Instead, the Barlow '867 patent describes the generation of a single modified market plan for each market. While each modified market plan may include multiple modifications relative to the current flight schedule as set forth in column 4, lines 15-20 of the Barlow '867 patent, only a single modified market plan is generated for each market at any one time. Based upon the computerized airline reservation system simulation of the Barlow '867 patent, the screen presence per individual market is calculated and, in turn, the average screen presence throughout all markets is determined. Based upon this average screen presence, the revenue potential attributable to the modified market plan in each market or in a combination of markets can be determined as described in column 5, line 66 – column 6, lines 3 of the Barlow '867 patent. In contrast to the claimed invention, if the technique described by the Barlow '867 patent desires to consider the impact of other modified market plans upon the profitability of the schedule, the entire process would be repeated.

By way of example, for a market defined by an origin of Dallas-Fort Worth (DFW) and a destination of Seattle, the original set of itineraries that was identified might include a single direct flight from DFW to Seattle (herein designated "Itinerary 1"). As such, the set of market

plans generated for the DFW to Seattle market could then include other direct flights between DFW and Seattle at different times than the currently scheduled flight, as well as connecting flights, such as an itinerary that includes a flight from DFW to San Francisco and subsequently a flight from San Francisco to Seattle (herein designated "Itinerary 2") and another itinerary including a flight from DFW to Denver and a subsequent flight from Denver to Seattle (herein designated "Itinerary 3").

For the DFW to Seattle market, a first market plan may elect to serve the market by offering both Itineraries 1 and 2, a second market plan may elect to serve the market by offering Itineraries 2 and 3, and a third market plan may elect to serve the market by only offering Itinerary 3. As such, the profitability of each of the first, second, and third market plans would then be individually determined. As recited by independent Claims 1, 8 and 11, this individual determination of the profitability of each market plan is conducted for each market plan in each market following the generation of the set of market plans for each of the plurality of markets. In contrast, the Barlow '867 patent would suggest the generation of a single modified market plan for each market (i.e., a first, second, or third market plan) and the subsequent determination of the overall profit of the modified schedule, followed by the generation of a second modified market plan for each market followed by the determination of the overall revenue potential of this further modified schedule. Conversely, the claimed invention does not attempt to optimize the overall profit of the schedule until each market plan has been constructed and individually analyzed to determine its profitability, while the method of the Barlow '867 patent would go to the effort of determining the revenue potential of the entire schedule for each modified market plan.

The Examiner further finds that the Barlow '867 patent discloses selecting from the set of market plans for each market a subset optimizing the profit of the schedule, while accounting for resources of the service provider (Figures 2 and 4-5; col. 2, lines 39-47; col. 6, lines 36-46 and 56-67). The Examiner also alleges in the Response to Arguments that Claims 1, 8, and 11 fail to provide any guidelines to explain how the claimed invention accounts for the resources of a service provider. In any event, the Examiner finds that, given the breadth of the claims, the

Barlow '867 patent takes into account flight service to a given travel provider based upon market size and average market revenue (col. 3, lines 46-59; col. 5, lines 61-65).

However, the Applicants respectfully disagree and submit that the Barlow '867 patent also fails to teach or suggest selecting from the set of market plans for each market the subset optimizing the overall profit of the schedule following the determination of the profitability of each market plan for each market, as recited by independent Claims 1, 8, and 11. Instead, as described above, the Barlow '867 patent would consider the revenue potential of a schedule comprised of a modified market plan for each market, but would be incapable of selecting from among a set of market plans that have been generated for each market and for which the profitability has been individually determined. Instead, to consider the impact of additional modified market plans upon the revenue potential, the overall process would be repeated in accordance with the technique described by the Barlow '867 patent, thereby potentially resulting in a somewhat less efficient process than that recited by the claimed invention.

Referring to the previous example, the selection process recited in independent Claims 1, 8, and 11 can analyze the various markets plans, i.e., flight options, and the profitability of each market plan within each market and select zero, one, or more market plans for each market, wherein the selected market plans for the various markets optimize the overall profit of the schedule. This selection process may determine that the overall profit of the schedule is optimized by supplementing the currently scheduled direct flight between DFW and Seattle (Itinerary 1) with a connecting flight through San Francisco (Itinerary 2), but not by offering other direct flights between DFW and Seattle at other times and not by offering another connecting flight through Denver. Thus, for the DFW to Seattle market, Itineraries 1 and 2 would be selected, and in combination with the itineraries selected for each of the other markets, would comprise the resulting airline schedule. Conversely, the Barlow '867 patent nowhere discloses the ability to select a subset from each set of market plans for optimizing profit since the Barlow '867 system can only consider one market plan at a time.

Furthermore, the Barlow '867 patent does not teach or suggest selecting a subset of market plans from among the set of market plans that has been generated for each market to optimize overall profit schedule "while accounting for resources of a service provider", as recited

by the independent claims. In this regard, independent Claims 1, 8 and 11 ensure that the service providers have appropriate resources to perform the subset of market plans that is selected to optimize the overall profit of the schedule, such as by having a sufficient number of aircraft in the appropriate locations to fly the modified schedule. In contrast, the Barlow '867 patent does not teach or suggest any consideration of the resources of a service provider. In addition, Applicants respectfully disagree that market size and average market revenue would be understood to be resources of a specific service provider in light of the description provided by the present application. Rather, the specification of the present application provides several examples of resources for service providers, such as the number of available planes, number of seats, or various equipment variables, which are distinctly different than general market size and average market revenue that may be associated with several service providers.

In the foregoing example, the subset optimizing the overall profit of the schedule would be selected in such a manner that no aircraft would be required to be in two places at any one time or to be in service in conjunction with two or more flights at one time. By optimizing the overall profit of the schedule subject to the resources of the service providers, the resulting schedule does not necessarily, and generally does not, include the market plan from each market that produces the largest profit since that particular subset of market plans is typically infeasible as a result of violating the constraints imposed by the resources of the service providers. However, the subset of market plans is selected in such a manner so as to optimize the overall profit subject to the constraints imposed by the resources of the service providers, such as by selecting those itineraries that are not necessarily the most profitable on an individual basis, but are the most profitable when considered in combination from among those subsets that are flyable. The Barlow '867 patent nowhere teaches or suggests taking into account the resources of a service provider.

For at least the foregoing reasons, independent Claims 1, 8, and 11 are not taught or suggested by the Barlow '867 patent. Since the claims that depend therefrom include each of the recitations of a respective independent claim, the dependent claims are likewise not taught or suggested by the Barlow '867 patent. Therefore, Applicants submit that the rejections of the claims under 35 USC §§102(b) and 103(a) are therefore overcome.

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CONCLUSION

For at least the foregoing reasons, Applicants respectfully request that the rejections be reversed and that a Notice of Allowance be issued.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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Lisa Rone — 9/6/05
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